

ABSTRACT

1.	Survey Area	Porbandar district, Gujarat
2.	Geographical Extent	69°20' to 70°10' East longitude and 20°45' to 22°05' North latitude
3.	Agro Climate Zone (NARP)	South Saurashtra Zone (GJ-7)
4.	Total area of the district	2,25,662 ha
5.	Kind of Survey	Soil Resource Mapping using Remote Sensing and GIS techniques.
6.	Base map	(a) IRS-1D Geocoded Satellite Imagery (1:50000 Scale) (b) SOI –Toposheet (1:50000 scale)
7.	Scale of mapping	1: 50000
8.	Period of survey	Dec, 2013

9. Soil Series association mapped and their respective area

S. No.	Mapping Unit	Soil Series Association	Total Area (ha)	Area (%)
1.	ALb2a1	Mohiyari-Mohabatpur	14756	6.54
2.	ALb2a2	Mohabatpur-Mohiyari	8780	3.89
3.	BAw2a1	Viswada-Kodegi	37297	16.53
4.	BAw2a2	Kerla-Viswada	26048	11.54
5.	BAw2d1	Sodana-Pardardi	3214	1.42
6.	CAI5d1	Pata-Nawagam	3084	1.37
7.	LSu2a1	Simani-Limbadi	22157	9.82
8.	LSu2a2	Baloch-Ranavav	16973	7.52
9.	LSu3d1	Adityana-Rataudi	24665	10.93
10.	LSu3d2	Virpur-Rataudi	1545	0.68
11.	LSw2a1	Barwara-Khagesri	11493	5.09
12.	LSw3a1	Kolikhada-Barwara	674	0.30
13.	LSw3d1	Barkhala-Simani	6957	3.08
14.	LSn7c1	Sijar-Palace	8519	3.78
15.	LSr4d1	Helabeli-Aniyari	8352	3.70
16.	Misc. (Habitation, River, Salt pan & Tank)		31148	13.80
	Total		225662	100.00

➤ **Geographic setting of soils under different physiography in Porbandar district**

Landscape	Physiography	Area (ha)	Area (%)
Alluvium	Alluvial plains	23536	10.43
Basalt	Lower pediplains	66559	29.49
Coastal Alluvium	Coastal alluvial plains	3084	1.37
Limestone	Hillocks/hummocks/ subdued hill	8352	3.70
	Lower pediplains	19124	8.47
	Pediments	65340	28.95
	Undifferentiated hills side slope	8519	3.78
	Misc. (Habitation, River, Salt pan & Tank)	31148	13.80
	Total	225662	100.00

➤ **Slope wise distribution of area in the district**

Slope Classes	Area (ha)	Area (%)
Nearly level to very gently sloping	140718	62.36
Very gently sloping to gently sloping	33841	15.00
Gently sloping to moderately sloping	8352	3.70
Moderately sloping to strongly sloping	3084	1.37
Moderately steep to steep	8519	3.78
Misc. (Habitation, River, Salt pan & Tank)	31148	13.80
Total	225662	100.00

➤ **Depth wise distribution of area in the district**

Depth	Area (ha)	Area (%)
Shallow	37466	16.60
Shallow to moderately deep	33184	14.71
Moderately deep	16973	7.52
Moderately deep to deep	50335	22.31
Deep to very deep	29936	13.27
Very deep	26620	11.80
Misc. (Habitation, River, Salt pan & Tank)	31148	13.80
Total	225662	100.00

➤ **Land use / Land cover wise distribution of are in the district**

Land use	Area (ha)	Area (%)
Agriculture	138178	61.23
Open scrub	47817	21.19
Forest	8519	3.78
Misc. (Habitation, River, Salt pan & Tank)	31148	13.80
Total	225662	100.00

➤ **Distribution of area under different erosion classes**

Erosion	Area (ha)	Area (%)
None to slight water erosion	46367	20.55
Slight to moderate erosion	118021	52.30
Moderate to severe erosion	27042	11.98
Severe water erosion	3084	1.37
Misc. (Habitation, River, Salt pan & Tank)	31148	13.80
Total	225662	100.00

➤ **Distribution of are under different Land capability classes**

Land Capability Class	Area (ha)	Area (%)
II	24210	10.73
III	16973	7.52
II-III	74838	33.16
III-IV	26916	11.93
IV	3084	1.37
IV-VI	39974	17.71
VII	8519	3.78
Misc. (Habitation, River, Salt pan & Tank)	31148	13.80
Total	225662	100.00

10. Salient Features

- Total 24 soil series have been mapped in Porbandar district of Gujarat.
- Moderately deep to deep soils occupy maximum area of 50335 ha (22.31%), followed by shallow 37466 ha (16.60%), shallow to moderately deep 33184 ha (14.71%), deep to very deep soils 29,936 ha (13.27%).
- Out of 225662 ha area, slight to moderate erosion covers maximum area of 118021 ha (52.30%), followed by none to slight erosion 46367 ha (20.55%), moderate to severe erosion 27042 ha (11.98%) and severe erosion 3084 ha (1.37%). Miscellaneous lands like habitation, built up area, river, tanks, roads etc covers 31148 ha (13.80%).
- Nearly level to very gently sloping land occupy the maximum area of 140718 ha (62.36%) followed by Very gently sloping to gently sloping lands covering 33841ha (15.00%)
- Good lands with minor limitation constitute 53,472 ha (23.70%) and good lands with moderate limitation have the area of 50,335 ha (22.31 ha), while the lands which are not suitable for agriculture have 51,577 ha (22.86%).
- Soils of Porbandar district, Gujarat mainly under seven physiography under basalt, limestone, alluvium and coastal alluvium landscape.